Remarks

Claims 13-17 and 30-36 remain in this application and are presented for the Examiner's review and consideration. Claims 1-12 and 18-29 have been canceled; and claims 15-17 and 30-36 have been amended. Applicants believe the amendments and remarks herein serve to clarify the present invention and are independent of patentability.

Section 112 Rejections

Claims 15-17 and 30-36 were rejected under the second paragraph of Section 112 as being indefinite. The Examiner particularly identified concerns with these claims. Applicants have amended claims 15-17 and 30-36 and respectfully submit that the claim amendments address the indefiniteness rejection.

Independent Claim 30

The pending claims 30-33 and 35-36 were rejected by the Examiner as anticipated by Braun et al. (WO 99/04440). Applicants respectfully traverse.

Braun does not show, teach or suggest using a length of a DNA molecule as the "active core" of an electronic gate (claim 30).

Braun describes only using DNA molecules to form a template or support structure to shape other electronic materials, such as deposited metals or metal oxides to make a micro-electronic device. (See Braun, Summary of Invention, page 3). Braun's DNA material, which is used as scaffolding, is removed after device formation. (See e.g., Braun page 18 lines 10-15). Braun does not show, teach or suggest use of the DNA material itself as the active device material. Moreover, Braun does not show teach or suggest the use of: 1. phosphorus bridges ("P-bridges") for transfer, tunneling and hoping of electrons and excitons between the conductive segments (the "transistor legs") and the active core (the "transistor head"). 2. Hydrogen bonds ("H-bonds") for capacitive coupling for controlling the electric charge in the active core. (Braun's invention is based on the use of foreign materials (mainly metal oxides) to

form tunneling barriers and capacitive barriers.). By using Braun's invention it is impossible to form similar width and the oxides change their properties over time, and therefore, the transistors made using Braun's proposed method are not identical to each other and their parameters are not stable.

In contrast, the P-bridges and the H-bonds used by the present invention are accurate and stable. For at least the foregoing reasons, claims 30 to 36 are patentable over Braun.

Allowed Claims

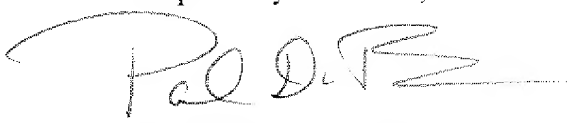
Applicants acknowledge with appreciation the allowance of claims 13 and 14.

Conclusion

In light of the foregoing, this application is now in condition for allowance and early passage of this case to issue is respectfully requested. If any questions remain regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

A fee for a one month extension of time is believed to be due and is being paid via credit. No other fee is believed to be due. However, please charge any other required fee (or credit any overpayments of fees) to the Deposit Account of the undersigned, Account No. 500601 (Docket No. 7640-X05-049).

Respectfully submitted,



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